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“Bare Branches” and the Marriage Market in Rural China: Preliminary Evidence from a village-level survey¹

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Abstract

Using data from a village survey in rural China, this study explores the relationships between current prevalence of involuntary bachelorhood and its causes and social consequences at the village level. We find that bachelors, inter-county marriage and marriage fraud exist in all regions, and are expected to become more frequent with the increasing surplus of males born after 1980 entering the marriage market. The marriage squeeze and social problems related to the bachelors are more serious in less-developed western villages, and heterogeneity within central villages is significant. Economic and socio-demographic factors are shown to be the major causes of the prevalence of bachelors at the village level in contemporary rural China. Our findings confirm the negative consequences of the marriage squeeze, and effective policies are urgently needed to respond to and prevent more negative consequences of gender imbalance in the foreseeable future.

Keywords

involuntary bachelors; marriage squeeze; villages; China

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Introduction

The male-biased sex ratio at birth (SRB) has major effects on the gender structure of the Chinese population. Since the 1980s, the SRB has increased sharply in China under the combined effects of son preference, low fertility and sex-selective abortion (Qi and Mason 2012). The SRB was 118.7 in 2005 and 118.06 in 2010 according to China's 1% national population survey in 2005, and the 2010 census. China's 1% national population survey in 2005 showed that the sex ratios in all age groups under the age of 20 were above the normal range, and the number of excess males under 20 had reached 33 million; many of these males will fail to find a wife in the next 20 years (Hesketh 2009; Zhu et al. 2009), who are so called "bare branches". The population sex ratios were above 105 in China's 1982, 1990, 2000, and 2010 censuses (Banister 2004; National Bureau of Statistics [NBS] 2011), while the normal range is 97.9–100.3 (Coale 1991).

The potential consequences of gender imbalance are receiving increasing attention, and some, such as the marriage squeeze, and increasing rates of irregular marriages¹, are likely to become more serious in the future (e.g., Jin and Liu 2009; Li 2007). Census data, historical data and criminological studies have been used to predict that gender imbalance may have serious consequences for demography (e.g., population aging with reduction of both population growth and labor force), marriage, economy, health (e.g., expansion of the sex industry and HIV transmission) and public safety (e.g., increase of crime and antisocial behavior) (Cai and Lavelly 2003; Das Gupta et al. 2010; Hudson and den Bore 2002; Ebenstein and Sharygin 2009). Referring to historical documents on the Nian Rebellion in the Qing Dynasty, it was hypothesized that the excess males in China could threaten regional and even global security (Hesketh and Zhu 2006; Hesketh 2009; den Bore and Hudson 2004).

Because the cohorts of excess males born in the 1980s have just reached the appropriate ages to marry and have children, most of the deleterious consequences of gender imbalance, especially those most serious at the macro level, are speculative and have not yet emerged, while the marriage squeeze is present and will exist for a long time. The male marriage squeeze and surplus males have been strongly emphasized in recent research, and are usually regarded as an important bridge between gender imbalance and its consequences for social stability. Especially in a society with a culture of universal marriage, the conflict between the strong demand for marriage and the shortage of marriageable women is likely to trigger a series of social problems that should be studied.

Due to a lack of quantitative data at the community level, the male marriage squeeze at the community level has not been studied. In order to fill this data gap, the Institute for Population and Development Studies in Xi'an Jiaotong University carried out a survey in 364 villages of 28 provinces in 2009, collecting village-level data on population, economy, marriage and community safety. Based on data collected in this survey, this paper explores the characteristics of the men who cannot marry (involuntary bachelors) because of the

¹Irregular marriages here include mercenary marriage, fraudulent marriage, exchange marriage, and child marriage. Mercenary marriage (*Maimai hunyin*) refers to a marriage arranged by a third party, possibly a parent or a kidnapper, who, in order to obtain money or property, illegally forces someone to marry.

marriage squeeze, and the rural marriage market. We focus on two issues: 1) involuntary bachelors' characteristics and the factors affecting their distribution; 2) the effects of the marriage squeeze on the local marriage market. Using data collected in Anhui Province, Liu and Jin (2011) find that most rural men get married between the ages of 22 and 27, and the probability of marrying decreases sharply after age 28; 96% of never-married men above 28 had experienced difficulties in the process of finding a wife. Because most men over 28 years old who have not married indicate that they would prefer to be married, we use the term "involuntary bachelors".

It should be pointed out that the involuntary bachelors aged 28 and above at the time of our survey are not the victims of abnormally high SRB since the mid-1980s. These bachelors are just the outcome of the male marriage squeeze, which is usually caused by these men's inferior socio-economic characteristics and women's hypergamy, and may have existed throughout China's history, regardless of the level of SRB. Analyzing involuntary bachelors aged 28 and above and individual and community characteristics, could help to understand the extent and potential social consequences of the future marriage squeeze driven by high SRB, which are likely to be more serious when the large numbers of surplus men born after the mid-1980s mature into marriageable age.

Literature Review

Male marriage squeeze

In China, marriage is regarded as universal, and being married is a symbol of social status and acceptance, and the continuation of the family line (Hesketh 2009). Based on China's 1990 and 2000 census data, the marriage rate was over 95% for both men and women who reach their late 30s (Davin 2007). In 2002, the marriage rates for men and women aged 30–34 were 94.1% and 98.7%, respectively (Meng 2009).

Paradoxically, the SRB in China has increased almost continuously since the early 1980s, which means that an increasing number of men face the risk of being forced to remain single. The marriage squeeze, an important consequence of gender imbalance, has emerged in some parts of rural China. The number of reported "bachelor villages" (A name given by some news agencies to villages with a high percentage of involuntary bachelors) is increasing in some remote rural areas (Jin and Liu 2009). Furthermore, unmarried men outnumber unmarried women in every province (Davin 2007).

In the next 20 years, when the cohorts born between the 1990s and 2010s reach marriageable age, the number of surplus males in the marriage market will be larger, and the marriage squeeze will become more serious. Hudson and den Bore (2002) estimate that by 2020 there will be 29–33 million surplus men aged 15–34 who are unable to find a wife. If the rise in the SRB cannot be reversed and the SRB rapidly returned to normal, the male marriage squeeze will last longer.

Marriage expense

The male surplus in the marriage market often results in enormous economic pressure on families. The shortage of marriageable women leads to an increase in marriage expenses for

men, and families with sons must face heavy financial burdens. Since the 1980s, rural men's marriage expenses, including a new house, new furniture, bride price, and wedding, have increased rapidly (Wang 2010). In some villages, the cost of a son's marriage is 8–20 times the annual household income (Min and Eades 1995; Wei and Zhang 2009). Many rural households arrange a marriage for their son by borrowing money, and families with more than one son are often in debt (e.g., Lu 2006; Peng 2004). Increasing household savings is an important strategy for families with at least one son to improve their sons' competitiveness in future marriage markets. The sex ratio can explain 68% of the increase in saving rates for rural households in China (Wei and Zhang 2009).

Women's security and family stability

A few studies claiming that the deficit of women would improve women's status have received much criticism (e.g., Hesketh and Zhu 2006). Most studies find that this is only an increase in women's marriage value, but not their status; men's demand for marriage and sex often stimulates crimes against women, such as abduction, rape, forced marriage and enslavement (Hudson and den Bore 2002; Banister 2004). In an analysis of 111 news reports on never-married men, Jin and Liu (2009) found that the prevalence of unmarried men indeed increases irregular or illegal behaviors related to marriage and sex, such as mercenary marriage, extramarital affairs, commercial sex and sexual assault, which can affect women's safety and damage family stability. Zhao (2003) found that trafficking of women was increasing in China, which has a link with the rising sex ratio, and these trafficked women were often forced into prostitution or marriage.

Data

In order to investigate the relationship between male marriage squeeze and their consequences at the village level, we carried out a “*Hundreds of Villages Survey*” in 28 provinces during the summer of 2009.

Village cadres were our respondents. They were asked to fill out a questionnaire to provide basic information about their villages, including information about society, economy, population, marriage, involuntary bachelors' behaviors and community safety. They also filled out a registration form for never-married men aged 28 and older, which applies only to those who lived in the villages during the survey time, including the name, age, and whether he was disabled. College students coming from rural villages were our investigators.

The mainland provinces of China are commonly divided into the eastern, central and western regions (e.g., Gu et al. 2007) and there are clear economic and demographic differences among these regions: eastern areas are the most developed, while western provinces are the least developed, and contain the majority of the poor, which may have significant consequences for marriage squeeze (Das Gupta, Ebenstein, and Sharygin 2010). We obtained 364 effective samples, of which 94 and 105, respectively, were from Shanxi and Shannxi provinces. Table 1 shows the provincial distribution of the surveyed villages by regions. The samples covering 28 provinces and municipalities, nine in the east, eight in the central and eleven in the west, essentially represent the overall situation of rural

communities in China. To avoid bias in favor of central and western samples, we separated Shanxi samples from the central villages and Shaanxi samples from the western villages and did regional comparisons throughout the analysis. Shanxi and Shaanxi are regarded as typical examples of central and western rural communities, respectively. We also compared Shanxi with the others in the central China as well as Shaanxi with the others in the western China. Shanxi is a less-developed province in central region, and Shaanxi is a more-developed province in the western region.

The sample method was not scientifically designed as in nationwide surveys or censuses, which are usually organized and conducted by the central government or the National Bureau of Statistics. However, there is no national survey focusing on the marriage squeeze and its social consequences at level of rural communities, since this issue has not attracted much attention from the government. Clearly villages in Shanxi and Shaanxi provinces are oversampled, and information on the local marriage market is not directly provided by involuntary bachelors themselves, but perceived and reported by village cadres. Although this is not a representative sampling survey, the information collected is much valuable to understand the questions to be addressed in this paper. We focused on filling a data gap, and providing preliminary and quantitative evidence concerning involuntary bachelors and the rural marriage market among eastern, central and western villages through a descriptive analysis.

It should be noted that village cadres have a considerable authority in their village's matters in rural China, who are native residents and are elected by all villagers as members of village committee, the rural organization at the grass-roots level in rural China. They are ideal respondents of the village survey because they are authorized to obtain actual statistics of village socio-economic development, investigate local marriage customs including marriage expenditures from men and women, brokers' rewards, and so on, as well as social conflicts and crime like marriage fraud. Furthermore, no matter who was the respondent, he or she was qualified to answer the overall questionnaire by working with other village committee members, and this was emphasized during the interviewers (the recruited college students) training. As a college student from rural area, the interviewer is usually regarded as a celebrity of the local community and his or her request to investigate the village for academic purpose was seldom denied by the village cadres. Thus we believe that this study can provide a useful preliminary description of the involuntary bachelors and rural marriage market at the village and community level.

Results

Basic characteristics of the surveyed villages

Table 2 presents the basic demographic, labor migration, terrain and economic information of the surveyed villages. The average population and number of households in a village are 2116.5 and 505.8, respectively. The population size of western villages is larger, namely 3,060.8 with 684.7 households, and the population sizes in Shanxi, Shaanxi and eastern villages are similar, about 1,800. The average family size in Table 2 is larger than what has been reported in the Chinese census because the former includes family members permanently residing in local communities and temporarily migrating out in cities while the

latter only includes family members residing and living in local communities over a half year. Labor emigration is a common phenomenon, and 422.3 laborers had migrated out of their towns (*zhen*, which is an administrative unit below the county and above the village, not just one single small town/urban locale) in each village, i.e., 0.9 members per household had emigrated for work. The number of male emigrants is larger than that of females. There is also a significant regional difference in the number of rural migrants: the ratio of out-migrating laborers is clearly higher in western and central villages (except for Shanxi Province), indicating that western and central rural areas are the main labor-sending areas, and is consistent with migrants' regional distribution at the national level.

Table 2 also shows that the eastern villages are mainly located in plains, central villages are evenly distributed among plains, hills or valleys, and western villages are mainly in mountains or plateaus. Compared with other central villages, in Shanxi there are more surveyed villages located in mountains or plateaus and less in plains. Compared with other western villages, in Shaanxi there are fewer surveyed villages located in mountains or plateaus and more in plains.

The average per capita income of the surveyed villages in 2008 was 3,571 *yuan*, which was lower than the national average income of 4,761 *yuan* then. This difference may be caused by a higher proportion of villages from less developed central and western China. The regional difference in income is also shown in Table 2: per capita income in eastern villages was nearly 6,000 *yuan*, which is far higher than that in both central and western villages. Per capita income in villages of Shanxi is lower than that in other central villages, while per capita income in villages of Shaanxi is higher than that in other western villages. This is consistent with that Shanxi being one of the less developed central regions, and Shaanxi being one of the more developed western regions.

Basic characteristics and distribution of involuntary bachelors

Table 3 presents information of involuntary bachelors' distribution, age, and physical health. There are 3268 involuntary bachelors in the 362 surveyed villages. Most involuntary bachelors are still relatively young; their average age is 41.4, about 18 percent are aged 28–30, about 38 percent are aged 31–40, and about 24 percent are aged 41–50. If men under 50 are regarded as marriageable, the overwhelming majority of bachelors are still of marriageable age. Even regarding forty as the maximum marriageable age, still more than a half are marriageable. From the regional distribution, the younger age of bachelors in western villages (including villages of Shaanxi Province) is clear. Their average age is close to 40 and the percent of bachelors under 40 is higher. The average age is the highest and the percent of bachelors under 40 is the lowest in eastern villages.

The proportion of bachelors aged 28–30, who were born in the late 1970s or early 1980s when the family planning policy began to be carried out and the SRB began to rise, also deserves attention. Among all of the bachelors, 18 percent are in the age group 28–30, and this proportion in western China is significantly higher than in eastern areas, which means that surplus males born since the 1980s are already affecting the marriage market, particularly in less-developed areas. We can predict that in future, along with more surplus

boys entering the marriage market, the trend toward younger bachelors will become more evident.

As shown in Table 3, 20.1 percent of bachelors are disabled, which is far higher than the national level²; health status is an important factor in men's failure to marry. Compared to non-disabled men, disabled men face a higher risk of being forced to remain single. After controlling other variables, Liu and Jin (2011) found the probability of marrying for disabled men is only 20 percent of that of their non-disabled counterparts. In less-developed western villages, only 13 percent of male bachelors are disabled, which is clearly lower than in other villages, and implies that the male marriage squeeze is more serious in western rural areas, where more healthy men have difficulties in marrying.

The average numbers of bachelors per village and per hundred households in each village are 9.0 and 2.8, respectively. There are more bachelors in western villages: 13.2 bachelors per village, and 3.9 bachelors per hundred households in each village. Based on the number of bachelors per hundred households, we divide the surveyed villages into high-bachelor-ratio villages (those with three or more bachelors per hundred households), and low-bachelor-ratio villages (those with less than three bachelors per hundred households). About 28 percent of villages have the higher ratio, and the proportion in western villages (including villages in Shaanxi) is the highest (34.4%). It is noteworthy that there is a large number of bachelors, as well as a higher proportion of high-bachelor-ratio villages in western regions. This indicates that the male marriage squeeze is more serious in western areas (including villages in Shaanxi) than in eastern and central villages (including villages in Shanxi); as a relatively more developed province among the western areas, the male marriage squeeze in Shaanxi is less serious than in other western provinces.

Factors affecting the prevalence of involuntary bachelors

Economic, demographic and geographical factors are correlated with the number of involuntary bachelors per hundred households (see Table 4). The greater the per capita income, the fewer bachelors, while the number of female labor out-migrants, distance from the county seat, and distance from the town seat are all positively correlated with the number of bachelors per hundred households. Our data also indicate that the number of bachelors per hundred households is highly correlated with topography. In mountain or plateau villages, the number of bachelors per hundred households is 3.9, higher than that in both plains villages, and hills or valley villages (which are 2.0 and 2.1, respectively)³. This reinforces our finding that remoteness of a village and difficulty of conditions lead to female migration and an increased marriage squeeze. On the other hand, the number of male labor out-migrants does not correlate significantly with the number of bachelors per hundred households.

Table 5 reports the marriage squeeze according to village cadres' perceived assessment of the degree of men's difficulty in getting married in their own villages. In nearly half of the villages, male villagers have difficulties in finding a wife; it is becoming common that some

²Statistics from the Second China National Sample Survey on Disability in 2006 indicate that 6.34% of Chinese are disabled.

³These figures here were not shown in tables.

men are unable to marry. In both less developed western and central areas, and more developed eastern areas, some villages are facing a male marriage squeeze. There is also a parallel between the level of economic development and the degree of difficulty in marrying: the less developed the villages, the more difficult it is for men to find a wife. Western and central villages (including villages in Shanxi and Shaanxi) have a more serious marriage squeeze. The degree of men's difficulty in getting married is consistent with the level of bachelor ratios. Sixty-five percent of high-bachelor-ratio villages face a male marriage squeeze, which is much higher than that of low-bachelor-ratio villages.

Table 5 also suggests reasons for the marriage squeeze reported by village cadres. More males born in the same birth cohort, a community's poor economy, more local women's emigration and high marriage expenses are important factors preventing rural men from marrying in western areas (including Shaanxi), while only high marriage expense is reported as the major problem in eastern villages. This probably indicates poor village economy leads to the phenomenon of more women migrating out and less women marrying in, which produces a serious shortage of marriageable women and more surplus males in the same cohort. On the other hand, in eastern villages, the richer economy and employment opportunities attract more nonlocal women marrying in for a better life, so the shortage of marriageable women is not serious. The key factor for men's failure to marry is poverty of their families, as a result of which they cannot afford the high marriage expense.

As to the regional differentials in reasons for the marriage squeeze, there is no significant difference between villages in Shaanxi and other western villages, while the differences between Shanxi and other central villages are clear. The proportions of community's poor economy and high marriage expenses are 20 percent higher in Shanxi than in other central areas, while the proportion of more males born in the same birth cohort and more local women's emigration for work are about 20 percent lower in Shanxi than in other central areas. Accordingly, economic factors are more important to prevent rural men from marrying in Shanxi, while demographic factors are more important for other central areas. Marriage squeeze driven by economic factors is more difficult to alleviate in a short time, while that driven by demographic distribution, such as more males born in the same birth cohort and more local women's emigration for work, can be easier to change through population mobility, including female migrant workers flowing back and women marrying in from poorer areas. Thus, the male marriage squeeze in Shanxi is more serious and will last a longer time than in other central villages. In villages with different levels of bachelor ratios, there is no significant difference among regions as to reasons for the marriage squeeze other than a community's poor economy. Sixty-five percent of village cadres in high-bachelor-ratio villages reported that the poor economy was the key reason for some male villagers' difficulties in getting married.

High marriage expense as a barrier to getting married

Information on marriage expenses is shown in Table 6. The average marriage expense for men is 95.1 thousand yuan, which is 3.5 times that of women's marriage expense (see Table 6), and 26.6 times per capita income in 2008. Thus, with the shortage of marriageable women in the marriage market, local women's marriage value has increased and the

resulting competition for marriageable women has dramatically increased men's marriage expenses. A recent study on inter-provincial marriages in rural China has a similar finding: between 2006 and 2008, it cost a man more than 100,000 yuan to marry locally, of which 70–100 thousand were spent on a new house. Building a new house is necessary to contract a marriage; men without a new house are less likely to marry (Liu et al. 2013). According to Wang (2010), total marriage expenses, which were only 665 yuan about forty years ago, have increased to 81,126 yuan for villagers 25 years old, and a new house becomes more and more important for the formation of a marriage. It should be emphasized that women's marriage expense is mostly in the form of dowry, which is often called "indirect bride price" in rural areas because it often wholly or partly comes from the bride price offered by the groom's family (Yan 1996; Wang 2010). Thus males absorb most of the marriage expenses and to families with sons, making a marriage constitutes a heavy economic burden.

Table 6 also shows that there is no obvious difference in marriage expense ratios (i.e., for males relative to females) between Shaanxi and other western villages, while the difference between Shanxi and other central villages is very significant. Compared to average marriage expenses in other central villages, the marriage expense in Shanxi for men is higher and for women is lower. Thus the average marriage expense ratio in Shanxi is much higher (5.1) than in other central villages (2.9). This indirectly reflects that because the male marriage squeeze in Shanxi is more serious than in other central villages, men should pay more to compete for the scarce marriageable women. In villages with a high bachelor ratio, although the average marriage expense for men or women is far lower than that in low-bachelor-ratio villages, the marriage expense ratio is higher (5.1) than that in villages with a low bachelor ratio (3.2). In sum, these differences among regions and bachelors' ratios reveal one feature of marriage expenses in the context of the marriage squeeze: marriage expense is a very competitive resource for marriageable men, and it is not surprising that the more serious the marriage squeeze, the more men's and women's marriage expenses differ.

Importing nonlocal brides from poorer remote areas: a strategy to alleviate marriage squeeze

Table 7 presents information about nonlocal wives from other counties, cities or provinces between 2006 and 2008. On average, there are about 24 out-of-county brides in each village, and 58 percent of the surveyed villages (i.e., 212 villages in total) have nonlocal wives from poorer counties or provinces. The payment to brokers for introducing a nonlocal wife is up to 5,000 yuan. The number of out-of-county brides is the largest in eastern villages, followed by western villages, while the number is the least in central villages. Because of the more developed economy, eastern villages attract more women to marry in and have become the main bride receiving areas. Therefore, it is not surprising that the number of out-of-county brides is higher for low-bachelor-ratio villages than for high-bachelor-ratio villages, since the majority of eastern villages belong to the former while most of western villages belong to the latter. Further, the percentage of villages with out-of-county brides from poorer counties or provinces is the highest in western villages, followed by eastern villages, while it is the lowest in central villages. This can be explained by regional disparities of economic development and the strength of the male marriage squeeze. Because of the less-developed economy in western villages, more women marry out for a better life, which gives rise to a

more serious deficit of marriageable women, a more serious male marriage squeeze, and a greater demand for nonlocal marriageable women, especially from poorer villages. Similarly, compared with central villages and low-bachelor-ratio villages, the number of nonlocal wives from poorer counties or provinces is larger in Shanxi and high-bachelor-ratio villages, respectively, illustrating the serious male marriage squeeze in these areas.

Brokers in wealthier eastern and central villages can charge more, which is consistent with the villages' economic level. Brokers can earn more in high-bachelor-ratio villages than in low-bachelor-ratio villages: in more than half of the former, brokers can charge more than 1,000 yuan, and the proportion who did not charge is lower. Table 7 also shows that there is no obvious difference in brokers' fees between Shanxi and other central villages, while the difference between Shaanxi and other western villages is very significant. The percentage of 1 to 5,000 yuan is higher in Shaanxi (78.5%) than in other western villages (59%), while that of zero yuan is much lower in Shaanxi (20%) than in other western villages (35.9%). One possible reason is that the economy in Shaanxi is better than those in other western villages. In short, the greater the shortage of marriageable women, the higher the demand for marriageable women, and the higher payment for introducing nonlocal marriageable women to brokers in order to obtain a marriage opportunity.

It is not rare that nonlocal wives run away. Between 2006 and 2008, cases of nonlocal wives' running away occurred in about 40 percent of villages with nonlocal wives, and on average there were 2.9 cases in these villages. Nonlocal wives ran away more frequently in villages with a more serious marriage squeeze, such as Shanxi (48.1%), Shaanxi (44.8%) and other western villages (41%). In these villages, the less-developed economy leads to a lower living standard, which is likely to aggravate instability of these inter-county or inter-provincial marriages. Likewise, the ratio of villages with runaway cases is the highest for western villages, next for eastern villages, and lowest for central villages, which is consistent with regional distribution of the percentage of nonlocal brides from remote counties. Again, both the ratio of villages with runaway cases and the average number of runaway cases per village are much higher in Shanxi than in other central areas, which confirms that male marriage squeeze in Shanxi is more serious. Clearly the average number of runaway cases per village is highest in high-bachelor-ratio villages and western villages. The above findings reveal that the more serious the male marriage squeeze, the higher the frequency of nonlocal brides from remote areas, and the more cases of runaway nonlocal wives.

The higher frequency of nonlocal wives' running away may reflect greater instability of nonlocal marriages and could involve some form of marriage irregularity. On the one hand, some nonlocal women may be forced to marry at a certain price by their family members or criminals. In such cases, they will look for opportunities to run away if they are not satisfied with their marriage. On the other hand, some runaway wives are actually marriage cheaters. Men's strong demand for nonlocal women is easily exploited by marriage cheaters; some women pretend to marry local men, then disappear after taking the bride price. We also provide information on marriage fraud (see Table 8). In sum, the normal marriage order faces the risk of being commercialized and distorted because of gender imbalance; in poor areas and those with a serious marriage squeeze, these problems are worse.

Marriage fraud: risk of inter-county marriage

Table 8 reports involuntary bachelors' experience of marriage fraud, which is a risk in inter-county marriage and gravely injures poor families with involuntary bachelors. About 28 percent of the villages had cases of marriage fraud against involuntary bachelors between 2006 and 2008. Involuntary bachelors and their families often suffer serious financial loss because of being cheated. In most villages with cases of marriage fraud, most victims are cheated out of more than 3,000 yuan, and in 26 percent of villages, the amount is even more than 10,000 yuan.

Table 8 also shows that bachelors' strong desire for marriage places them at high risk of marriage fraud, and the occurrence of marriage fraud is higher in villages with more serious marriage squeeze. First, cheating of bachelors who suffer serious financial loss is more common in eastern and western villages, which is consistent with the distribution of nonlocal wives. Although victims are cheated out of less money in western villages than in eastern villages, the former lost more considering the low per capita income in western villages. Clearly the proportion of villages suffering marriage fraud is highest in Shanxi (35.9%), next in Shaanxi (30.5%), which are higher than in eastern and other western villages. Second, the difference between Shanxi and other central villages is clear, but not between Shaanxi and other western villages. The occurrence of marriage fraud is higher in Shanxi than in other central villages, and victims suffer greater financial loss. These reflect that the marriage squeeze is more serious in Shanxi. Third, the percentage of villages suffering marriage fraud is higher in high-bachelor-ratio than in low-bachelor-ratio villages.

Conclusions

Using data from the *Hundreds of Villages Survey* carried out in 2009, this study explores the issues facing involuntary bachelors in the context of the male marriage squeeze in rural China. A high proportion of villages are experiencing a male marriage squeeze; some men are unable to make timely marriages and become so-called "bare branches", a typical vulnerable group and victims of the marriage squeeze. The distribution and prevalence of involuntary bachelors is uneven among regions. First, as important social consequences of male marriage squeeze, involuntary bachelors, inter-county and inter-provincial marriage as well as marriage fraud exist in eastern, central and western villages in contemporary China, and these social outcomes are expected to become more prevalent when the greater surplus of males born after 1980, caused by the abnormally high sex ratio at birth, enter the marriage market. Second, because of significant regional differentials in level of economic development and the trend of female marriage migration from west to east, the marriage squeeze and social problems related to involuntary bachelors are more serious in less-developed western villages than in central and eastern villages. Third, heterogeneity within central villages is significant since the marriage squeeze is much more serious in Shanxi than in other central villages, while there is no significant difference between Shaanxi and other western villages; thus the surveyed villages in Shaanxi could represent the all surveyed western villages. Fourth, high-bachelor-ratio (referring to three or more involuntary bachelors per hundred households) is an effective index to describe the degree of male marriage squeeze and related social consequences. Finally, some economic factors and

socio-demographic factors appear be the key reasons for involuntary bachelors in contemporary rural China, including local per capita income, remoteness of a village (distance from county seat and distance from town seat), difficulty of natural environment caused by topography, female labor emigration, females' marriage migration, and local marriage customs such as prevalence of high bride price and a new house provided by a grooms' family as a necessity for marriage formation, which is related to the traditionally influential patrilineal family system in rural areas.

The marriage squeeze has negative effects on the marriage market. Because of the shortage of marriageable women and men's strong demand for marriage, women as brides have become commercialized, the marriage expense for men has increased sharply, mercenary marriage and marriage fraud have been emerging, and order in the marriage market is deteriorating. In areas with a more serious marriage squeeze, the marriage market is affected significantly. Men in villages with a more serious marriage squeeze, such as western villages, villages in Shanxi, and higher-bachelor villages, have to pay much greater marriage expense than women, and marrying nonlocal women from poorer counties or provinces, the running away of nonlocal wives, and marriage fraud to involuntary bachelors are more common. Because of the accumulation of surplus men since the birth cohorts of the 1980s, China will face a long-lasting and more serious male marriage squeeze, which suggests that as the marriage squeeze becomes more widespread, these problems in the marriage market will become more serious in the near future.

It is true that the increasing population of involuntary bachelors has not triggered the horrible consequences in other parts of East Asia. However, it should be realized that a slightly higher rate of bachelorhood will give rise to a massive population of involuntary bachelors, because Chinese population was over 1.3 billion in 2010. Therefore, it is difficult to help these bachelors to marry by the way of "importing brides" from other countries and providing them with necessary and affordable social security. Furthermore, the culture of "everyone should get married" has more negative impacts on bachelors' psychological wellbeing, which is likely to give rise to social exclusion of this emerging group and become a hidden danger of social stability. In short, these consequences, which have not appeared in other Asian countries, are likely to appear in China; the government and society should adopt and implement policies to prevent increasing serious negative consequences of gender imbalance.

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Table 1

Provincial distribution of surveyed villages

Eastern China		Central China		Western China	
Province	No. of villages	Province	No. of villages	Province	No. of villages
Liaoning	2	Shanxi	94	Shaanxi	105
Hebei	7	Heilongjiang	4	Chongqing	3
Tianjin	6	Jilin	5	Sichuan	12
Shandong	15	Hunan	10	Guizhou	10
Jiangsu	5	Hubei	7	Yunnan	6
Zhejiang	3	Jiangxi	8	Gansu	11
Shanghai	1	Anhui	11	Qinghai	7
Fujian	5	Henan	10	Ningxia	4
Hainan	2			Xinjiang	3
				Inner Mongolia	1
				Guangxi	7
Total	46	Total	149	Total	169

Table 2

Basic characteristics of villages (averages)

	All	Shanxi	Shaanxi	Eastern	Central	Western
Sample*	(364)	(94)	(105)	(46)	(55)	(64)
Population						
Total population	2116.5	1795.4	1803.6	1828.4	2404.6	3060.8
Total households**	505.8	469.3	408.1	477.7	573.9	684.7
Family size	4.5	3.9	4.8	4.2	5.5	4.5
Labor migration						
No. of male migrant labor	270.1	144.3	255.5	191.1	382.8	432.6
No. of female migrant labor	152.1	65.3	136.2	103.5	248.0	252.8
No. of migrants per household	0.9	0.5	1.0	0.6	1.4	1.1
Male migrant labor per household	0.6	0.3	0.7	0.4	0.9	0.7
Female migrant labor per household	0.3	0.1	0.3	0.2	0.5	0.4
Terrain (%)						
Plains	35.2	27.7	39.0	58.7	49.1	10.9
Hills or valley	24.5	26.6	11.4	30.4	38.2	26.6
Mountains or plateaus	40.3	45.7	49.5	10.9	12.7	62.5
Average per capita income in 2008 (yuan)	3571.0	3022.4	3722.3	5990.8	3358.7	2614.5

Notes:

* Figures in parentheses are sample size. Similarly hereafter.

** In 9 surveyed villages, the numbers of households are missing, so the sample size for both "Total households" and "Family size" are 355, including 94, 103, 42, 55 and 61 in villages in Shanxi, villages in Shaanxi, eastern villages, central villages and western villages, respectively.

Table 3

Basic characteristics and distribution of involuntary bachelors

	All	Shanxi	Shaanxi	Eastern	Central	Western
Basic characteristics	(3268)	(667)	(901)	(338)	(533)	(829)
Age (year)	41.4	41.9	40.2	44.3	43.4	39.7
Age group (%)						
28–30	18.2	12.4	19.4	10.5	18.7	24.5
31–40	37.6	39.1	39.9	33.3	32.1	39.2
41–50	23.6	29.6	23.2	25.9	20.2	20.6
51–60	12.5	12.8	12.6	17.7	15.6	7.9
60+	8.1	6.2	4.9	12.5	13.4	7.8
Physical health (%)						
Disabled	20.1	18.3	25.4	27.4	20.9	13.0
Not disabled	79.9	81.7	74.6	72.6	79.1	87.0
Distribution	(362)	(94)	(105)	(46)	(54)	(63)
Total no. of involuntary bachelors	3268	667	901	338	533	829
No. of involuntary bachelors per village	9.0	7.2	8.6	7.4	9.7	13.2
No. of bachelors per hundred households	2.8	2.4	2.9	2.3	2.3	3.9
Villages' distribution according to the ratio of bachelors*	(355)	(93)	(103)	(43)	(55)	(61)
High-bachelors-ratio villages (%)	28.2	24.7	29.1	25.6	27.3	34.4
Low-bachelors-ratio villages (%)	71.8	75.3	70.9	74.4	72.7	65.6

Notes:

* High-bachelor-ratio villages refers to those with three or more involuntary bachelors per hundred households, and low-bachelor-ratio villages refers to those with less than three involuntary bachelors per hundred households.

Table 4

Correlation between village characteristics and the number of involuntary bachelors per hundred households

Correlation with no. of involuntary bachelors per hundred households	
Sample	(354)
Per capita income in 2008	−0.105*
Male labor migrants/households	0.102
Female labor migrants/households	0.106*
Distance from county seat (Kilometers)	0.210**
Distance from town seat (Kilometers)	0.140**

Notes:

*
p< .05,**
p< .01.

Table 5

Evidence of men's difficulty in marrying from village cadres

	All	region					Ratio of bachelors	
		Shanxi	Shaanxi	Eastern	Central	Western	LBRV	HBRV
Sample	(364)	(94)	(105)	(46)	(55)	(64)	(254)	(100)
Assessment of the degree of men's difficulty in getting married (%)								
Very or somewhat difficult	47.5	51.1	50.5	38.9	46.3	51.6	41.0	64.0
Not or little difficult	52.5	48.9	49.5	61.1	53.7	48.4	59.0	36.0
Community factors affecting male villagers' marriage chance (%)								
More males than females in the same birth cohort	30.8	18.1	36.2	26.1	38.2	37.5	31.0	31.0
Poor economy leads more women to marry out and less to marry in	49.7	53.2	56.2	28.3	36.4	60.9	44.4	65.0
Many local women emigrate for work	43.1	21.3	58.1	34.8	45.5	54.7	42.9	46.0
Marriage expense is too high	56.3	72.3	49.5	65.2	52.7	40.6	56.0	60.0

Notes: LBRV: Low-bachelor- ratio villages; HBRV: High-bachelor-ratio villages. Similarly hereafter.

Table 6

Marriage expense

	Region					Ratio of bachelors	
	All	Shanxi	Shaanxi	Eastern	Central	Western	HBRV
Sample	(347)	(88)	(103)	(43)	(51)	(62)	(97)
Men's marriage expense (RMB 1,000)	95.1	136.0	83.6	112.5	80.4	58.3	84.1
Women's marriage expense (RMB 1,000)	27.2	26.7	19.0	22.7	64.0	14.2	16.5
Marriage expense ratio *	3.5	5.1	4.4	4.9	2.9	4.3	5.1

Notes:

* The marriage expense ratio is the ratio of men's marriage expense to women's.

Table 7

Nonlocal brides from other counties between 2006 and 2008

	Region					Ratio of bachelors	
	All	Shanxi	Shaanxi	Eastern	Central	Western	HBRV's
No. of out-of-county brides	(351)	(91)	(103)	(43)	(51)	(63)	(96)
	24.2	19.7	20.5	34.7	24.6	29.1	18.0
Nonlocal brides from poorer remote counties							
Are there nonlocal brides from more remote areas? (%)	(364)	(94)	(105)	(46)	(55)	(64)	(100)
Yes	58.2	57.4	63.8	56.5	47.3	60.9	65.0
Brokers' reward (%)	(209)	(54)	(65)	(26)	(25)	(39)	(63)
RMB 0	23.7	18.5	20.0	19.2	20.0	35.9	19.0
Below RMB 1,000	39.7	42.6	47.7	23.1	36.0	30.8	28.6
RMB 1,000–5,000	30.4	33.3	30.8	46.2	28.0	28.2	41.3
Above RMB 5,000	5.2	5.6	1.5	11.5	16.0	5.1	11.1
Nonlocal bride runaway	(211)	(54)	(67)	(26)	(25)	(39)	(64)
Ratio of villages with runaway cases for nonlocal wives (%)	42.2	48.1	44.8	38.5	28.0	41.0	42.2
Average No. of runaway cases per village	(87)*	(24)	(30)	(10)	(7)	(16)	(27)
	2.9	3.3	2.8	1.7	2.6	3.0	3.2

Notes:

* The sample size for "Average cases in villages with runaway cases" is computed based on the number of villages with nonlocal wives.

Table 8

Marriage fraud against involuntary bachelors between 2006 and 2008

	Region					Ratio of bachelors	
	All	Shanxi	Shaanxi	Eastern	Central	Western	HBRV
Sample	(360)	(92)	(105)	(46)	(54)	(63)	(99)
Proportion of villages suffering marriage fraud (%)	27.8	35.9	30.5	28.3	13.0	23.8	33.3
Amount of financial loss (%) [*]	(100)	(33)	(32)	(13)	(7)	(15)	(33)
Below 3,000 yuan	16.0	18.2	9.4	7.7	28.6	20.0	15.1
3,000–5,000 yuan	28.0	9.1	43.8	30.8	14.3	40.0	21.2
5,000–10,000 yuan	30.0	36.4	28.1	30.8	14.3	26.7	42.4
Above 10,000 yuan	26.0	36.4	18.8	30.8	42.9	13.3	21.2

Notes:

^{*} The sample size for “Amount of financial loss” is based on the number of villages suffering marriage fraud.